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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of	:	Before the Examiner:
Scott A. Morgan et al.	:	Angela Armstrong
Serial No.: 09/213,856	:	Group Art Unit: 2641
Filed: December 17, 1998	:	Intellectual Property
Title: SPEECH COMMAND INPUT	:	Law Department - 4054
RECOGNITION SYSTEM FOR	:	International Business
INTERACTIVE COMPUTER DISPLAY	:	Machines Corporation
WITH INTERPRETATION OF	:	11400 Burnet Road
ANCILLARY RELEVANT SPEECH	:	Austin, Texas 78758
QUERY TERMS INTO COMMANDS	:	Date: JANUARY 23, 2002

BRIEF ON APPEAL

Assistant Commissioner of Patents
Washington, D.C. 20231

Sir:

 This is an Appeal from the Final Rejection of Claims 1-
3, 5-8, 10-13, and 15 of this Application. An Appendix
containing a copy of each of the Claims is attached.

I.   Real Party in Interest

 The real party in interest is International Business
Machines Corporation, the assignee of the present
Application.

II.   Related Appeals and Interferences

 U.S. Application SN. 09/213,588, Scott A. Morgan et
al., filing date: 12/16/98.

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III. Status of Claims

A. TOTAL NUMBER OF CLAIMS IN APPLICATION

There are 12 claims in this Application.

B. STATUS OF ALL THE CLAIMS

1. Claims cancelled: Claims 4, 9, and 14.
2. Claims withdrawn from consideration but not cancelled: None.
3. Claims pending: None.
4. Claims allowed: None.
5. Claims rejected: Claims 1-3, 5-8, 10-13, and 15.

C. CLAIMS ON APPEAL

Claims on appeal: Claims 1-3, 5-8, 10-13, and 15.

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IV.   Status of Amendment

Claims 1-15 were in the filed Application.

Claims 1 through 15 in this Application were first rejected under 35 U.S.C. 102(b) in an Office Action mailed October 4, 2000.

Applicants filed an Amendment on January 5, 2001 which amended the claims to correct informalities, and traversed the rejection under 35 U.S.C. 102(b).

In a Office Action mailed March 22, 2001, the first rejection was withdrawn, and Claims 1-15 were rejected in a new rejection under sections 35 U.S.C. 102(b) and 103(a).

Applicants filed an Amendment on June 25, 2001 which amended the claims, and traversed the rejection.

The claims were finally rejected in a Final Rejection mailed September 13, 2001.

Applicants submitted an Amendment after Final Rejection filed October 12, 2001 which cancelled Claims 4, 9, and 14 and amended the claims to their present form.

An Advisory Office Action mailed October 23, 2001 entered the Amendment after Final Rejection but maintained the Final Rejection of Claims 1-3, 5-8, 10-13, and 15.

Claims 1-3, 5-8, 10-13, and 15 are now on Appeal.

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V.   Summary of Invention

The present invention is directed to speech recognition computer systems in which specified actions are performed on the computer controlled display in response to recognized specific spoken commands. The <u>invention detects speech terms, i.e. non-commands which are not any of the specific commands directly recognizable by the system.</u> These speech terms have similar meanings to any of the specified commands recognized by the system, and such speech terms could be reasonably spoken by a user trying to achieve the same results as a specified command. The present invention establishes means for determining whether such a non-command speech term may have relevance to one of the specified commands, and if such relevance is established, for then displaying the specified relevant command simultaneously with any normally recognized command. This gives the user the opportunity to easily select such relevant commands on an equal basis with the normally recognized commands.

VI.   Issues

Whether Claims 1-3, 5-8, 10-13, and 15 are unpatentable under 35 U.S.C. 103(a) over White et al. (US Patent No. 5,386,494) in view of Morin et al. (US Patent No. 5,748,841).

VII.   Grouping of Claims

All of the claims stand or fall together.

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VIII.   Argument

Claims 1-3, 5-8, 10-13, and 15 are unobvious under 35 U.S.C. 103(a) over White et al. (US Patent No. 5,386,494) in view of Morin et al. (US Patent No. 5,748,841).

Both the system of the present invention and that of White et al. are directed to speech recognition computer systems in which specified actions are performed on the computer controlled display in response to specific spoken commands. However unlike White et al., the present invention also recognizes other speech terms i.e. non-commands which are not any of the specific commands directly recognizable by the system.

White et al. do not even consider spoken terms which are not commands. All of the spoken words detected by White et al. are specific commands recognizable by their system. When White et al. present a menu of alternate commands to the recognized spoken command, as in Fig. 5A, these alternate commands are not displayed in response to the recognition of non-command speech terms. The alternate commands are displayed either automatically by the system in response to an already recognized command or if requested by the user. Such alternate commands cover functions related to that of an already recognized command.

Even in the section cited by Examiner at col. 8, lines 43-68 and Fig. 5C in White et al. which present menus of synonym and paraphrased commands, these alternate commands are not offered in response to the detection of non-command speech terms. Rather, the commands in the menus are provided to the user as specific commands which the user may recite to the system as more specific commands for carrying out more specific functions of the recognized command. Thus, White et al. are in no way concerned with the

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<u>recognition of or the response to speech terms which are not</u>
<u>commands.</u>

In attempting to cure this basic deficiency of the White et al. reference, the Examiner has picked and chosen a portion of the Morin et al. disclosure, and given it an interpretation and then combined it with the disclosure of White et al. in a manner which is in no way suggested by either of the combined references.

Morin et al. relates to a complex process for heuristically teaching a user the command languages of computer operating systems as well as programming applications for such systems through spoken user input and feedback from the system. There is no suggestion from the basic White et al. system as to why and how one skilled in the art could modify it with elements of the heuristic i.e. self-learning system of Morin et al..

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The suggestion for combining these White et al. with Morin et al. could only come from Applicants' own teaching, and, thus, cannot form any basis for a combination of references.

It is submitted that the combination of the White et al. and Morin et al. references is being made not with the requisite foresight of one skilled in the art, but rather with the hindsight obtained solely by the teaching of the present invention. This approach cannot be used to render Applicants' invention unpatentable.

> "To imbue one of ordinary skill in the art with knowledge of the invention in suit, when no prior art references of record convey nor suggest that knowledge, is to fall victim to the insidious effect of a hindsight syndrome wherein that which only the inventor taught is used against its teacher." W. L. Gore, 721 F 2d at 1553, 220 USPQ, pp. 312-313.
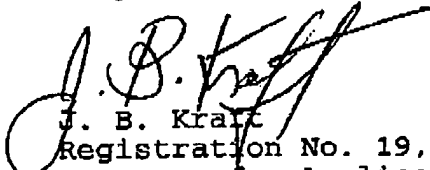
> "One cannot use hindsight reconstruction to pick and choose among isolated disclosures in the prior art to deprecate the claimed invention." In re Fine, 5 USPQ 2d 1596 (C.A.F.C.) 1988.

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IX. Conclusion

Accordingly, Claims 1-3, 5-8, 10-13, and 15 are submitted to be patentable under 35 U.S.C. 103(a) over White et al. (US Patent No. 5,386,494) in view of Morin et al. (US Patent No. 5,748,841). It is respectfully requested that the Final Rejection be reversed, and that Claims 1-3, 5-8, 10-13, and 15, all of the remaining claims in the present patent application be found to be in condition for allowance.

It is also respectfully requested that the accompanying Amendment be entered for the purpose of making dependent Claims 5, 10, and 15 depend respectfully depend from claims currently in the Application in place of their dependence from cancelled claims.

Respectfully submitted,

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APPENDIX

Claims on Appeal

1. An interactive computer controlled display system with speech command input recognition comprising:

   means for predetermining a plurality of speech commands for respectively initiating each of a corresponding plurality of system actions,

   means for providing for each of said plurality of commands, an associated set of non-command speech terms, each term having relevance to its associated command,

   means for detecting speech command and non-command speech terms,

   means responsive to a detected speech command for displaying said command, and

   means responsive to a detected non-command speech term having relevance to one of said commands for displaying the relevant command simultaneously with said detected speech command.

2. The system of claim 1 further including interactive means for selecting a displayed command to thereby initiate a system action.

3. The system of claim 2 wherein said means for selecting said displayed command include speech command input means.

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5.   The system of claim 3 further including:

a plurality of speech terms used in connection with specific actions of the system, and

wherein said means for providing said associated set of speech terms include:

a stored relevance table of universal speech input commands and universal computer operation terms conventionally associated with actions initiated by said input commands, and

means for relating said plurality of speech terms used in connection with specific actions of said system with commands in said relevance table.

6.   A method for providing speech command input to an interactive computer controlled display system with speech command input recognition comprising:

predetermining a plurality of speech commands for respectively initiating each of a corresponding plurality of system actions,

providing for each of said plurality of commands, an associated set of non-command speech terms, each term having relevance to its associated command,

detecting speech command and non-command speech terms,

displaying a speech command responsive to its detection as a speech command, and

responsive to a detected non-command speech term having relevance to one of said commands displaying the relevant command simultaneously with said detected speech command.

7.   The method of claim 6 further including the step of interactively selecting a displayed command to thereby initiate a system action.

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8.   The method of claim 7 wherein said selecting of said displayed command include speech command input means.

10.   The method of claim 8 further including the step of:

providing a plurality of speech terms used in connection with specific actions of the system, and

wherein said step of providing said associated set of speech terms includes:

storing a relevance table of universal speech input commands and universal computer operations terms conventionally associated with actions initiated by said input commands, and

relating said plurality of speech terms used in connection with specific actions of said system with commands in said relevance table.

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11. A computer program having program code included on a computer readable medium for speech command input recognition in an interactive computer controlled display system comprising:

means for predetermining a plurality of speech commands for respectively initiating each of a corresponding plurality of system actions,

means for providing for each of said plurality of commands, an associated set of non-command speech terms, each term having relevance to its associated command,

means for detecting speech command and non-command speech terms,

means responsive to a detected speech command for displaying said command, and

means responsive to a detected non-command speech term having relevance to one of said commands for displaying the relevant command simultaneously with said detected speech command.

12. The computer program of claim 11 further including interactive means for selecting a displayed command to thereby initiate a system action.

13. The computer program of claim 12 wherein said means for selecting said displayed command include speech command input means.

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15. The computer program of claim 13 further including:

a plurality of speech terms used in connection with specific actions of the system, and

wherein said means for providing said associated set of speech terms include:

a stored relevance table of universal speech input commands and universal computer operation terms conventionally associated with actions initiated by said input commands, and

means for relating said plurality of speech terms used in connection with specific actions of said system with commands in said relevance table.

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